REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Office Action dated December 6, 2006. In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

Status of the Claims

As outlined above, claims 3-8, 10 and 12-13 stand for consideration in this application. Claims 1-2, 9 and 11 are being cancelled without prejudice or disclaimer. Claims 3-4, 10 and 12 are being amended to more particularly point out and distinctly claim the subject invention. Applicants hereby submit that no new matter is being introduced into the application through the submission of this response. A new claim 13 is being added.

All the amendments to the claims and the specification are supported by the specification. Applicants hereby submit that no new matter is being introduced into the application through the submission of this response.

Formality Rejection

Calims 1-3 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite, and claim 4 was objected to for a minor formal error. As indicated, the claims are being amended as required by the Examiner. Accordingly, the withdrawal of the outstanding informality rejection is in order, and is therefore respectfully solicited.

Prior Art Rejections

Claims 1-3, 6, and 9-12 were rejected under 35 U.S.C. §102(e) as being anticipated by Wang (US 7,092,986), claims 4-5 were rejected under 35 U.S.C. §103 (a) as being unpatentable over Wang '986 in view of Watanabe at al. (US 7,031,709), and claims 7-8 were rejected over Wang '986 in view of Funabiki et al. (US 2005/0020265). Applicants have reviewed these rejections, and hereby respectfully traverse.

A mobile node is an Internet-connected device whose location and point of attachment to the Internet may frequently be changed. This kind of node is often a cellular telephone or handheld or laptop computer, although a mobile node can also be a router. Mobile IP is an Internet Engineering Task Force (IETF) standard communications protocol that is designed to allow mobile device users to move from one network to another while

maintaining their permanent IP address. All the variations of Mobile IP assign each mobile node a permanent home address on its home network and a care-of address that identifies the current location of the device within a network and its subnets. In Internet routing, a care-of address is a temporary IP address for a mobile node (mobile device) that enables message delivery when the device is connecting from somewhere other than its home network.

The packet communication system (for example, the first embodiment depicted in Fig. 1 and the annotated drawing of Fig. 9: second embodiment) comprises packet communication devices 1-3 that are arranged in a plurality of foreign networks 1-3, respectively, and that are at least part of foreign networks existing as networks visited by a mobile node 103. When the mobile node moved among the plurality of foreign networks, if a packet communication device is arranged in a visited foreign network, the mobile node is given by the packet communication device a care-of address that corresponds to the visited foreign network in a one to one manner. The mobile node continuously sends information pertinent to an updated care-of address 3 given in the most recently visited foreign network 3 (*"if the judgment is that the forwarding is possible, the mobile node 103 selects a current care-of address as the communication address (step 608)."* p. 15, last paragraph; Fig. 3), after moving through at least three foreign networks 1-3, to at least one of the packet communication devices 1-3 arranged in the at least three foreign networks 1-3 in which the mobile node visited previously. A packet, which is sent from a corresponding node 109 (terminal A) designated to the mobile node 103 at a care-of-address 1 given in a respective previously visited foreign network 1, is transferred from the packet communication device 1 of the respective previously visited foreign network 1 directly to the updated care-of-address 3 (*"when the mobile node 103 has moved to the foreign network 2, this mobile node 103 sends the binding update to the home agent 105 on the foreign network 1. Thereby, the home agent 105 belonging to the foreign network 1 is enabled to capture IP packets sent to the mobile node's care-of address (Path 112) and forward it to the mobile node in the foreign network 2 (Path 113); therefore a communication session can be maintained."* p. 17, lines 15-22).

The invention recited in claim 10 is directed a communication network including all components of the packet communication system of claim 1.

The invention recited in claim 12 is directed a method for selecting an IP address in a mobile node implemented via the packet communication system of claim 1.

In contrast to the present invention, Wang's tunnel is created between every subsequent care-of-addressed in the new foreign networks such that a packet has to be

transfer via TWO mobile agents, rather than just ONE as in the present invention (See annotated drawing).

First, Wang's mobile node does NOT "continuously send information pertinent to an updated care-of address 3 given in the most recently visited foreign network 3, after moving through at least three foreign networks 1-3, to at least one of the packet communication devices 1-3 arranged in the at least three foreign networks 1-3 in which the mobile node visited previously" as does the mobile node 103 of the present invention.

When Wang's mobile node moves from foreign network 1, through foreign network 2, to foreign network 3, a mobile agent 1 in foreign network 1 holds, as binding, a care-of-address 2 which is obtained in the foreign network 2 by the mobile node, a mobile agent 2 in the foreign network 2 holds, as binding, a care-of-address 3 which obtained in the foreign network 3 by the mobile node. Therefore, a packet, which is sent from corresponding node to the care-of-address 1, is transferred via the care-of-address 1 -> the care-of-address 2 -> the care-of-address 3, through two mobile agents and the tunnel created between care-of-address, rather than "transferred from the packet communication device 1 of the respective previously visited foreign network 1 directly to the updated care-of-address 3 (i.e., skipping Agent 2 and the care-of-address 2)" as in the present invention.

Watanabe and Funabiki fail to compensate for Wang's deficiencies. Applicants contend that the cited references fail to teach or disclose each and every feature of the present invention as recited in independent claims 3, 10 and 12.

Regarding claims 4 and 5, according the present invention, an address of a packet communication device of a foreign network is used as a home address when the packet communication device of the foreign network can work as a home agent for the mobile IP. Further, the terminal selects a home address to make connection based on the application when there are plural home addresses, and sending a notification that the care-of-address is stopped when the home address has not been used. The address used for packet transfer is managed in a manner as shown in Fig. 7. Wang dose not disclose such an address management method. Watanabe only obtains a position of a foreign network in accordance with the changing of the care-of-address. As such, the combination of the references does not teach or suggest the invention recited in claims 4-5.

Regarding claims 7 and 8, Funabiki obtains an address of a new home agent from an AR (access router) of the foreign network to switch the home agent, when a number of hops or delays between the terminal and the home agent is greater than a predetermined threshold. However, according to the present invention, the home agent is not switched, and registration

care-of-address to the home agent is stopped when the number of hops or delays meets a predetermined condition. As such, the combination of the references does not teach or suggest the invention recited in claims 7-8.

As such, the present invention as now claimed is distinguishable and thereby allowable over the rejections raised in the Office Action. The withdrawal of the outstanding prior art rejections is in order, and is respectfully solicited.
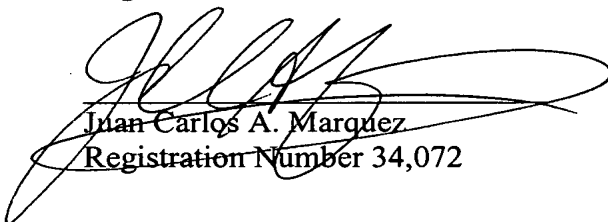
Conclusion

In view of all the above, Applicants respectfully submit that certain clear and distinct differences as discussed exist between the present invention as now claimed and the prior art references upon which the rejections in the Office Action rely. These differences are more than sufficient that the present invention as now claimed would not have been anticipated nor rendered obvious given the prior art. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application as amended is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicants' undersigned representative at the address and phone number indicated below.

Respectfully submitted,

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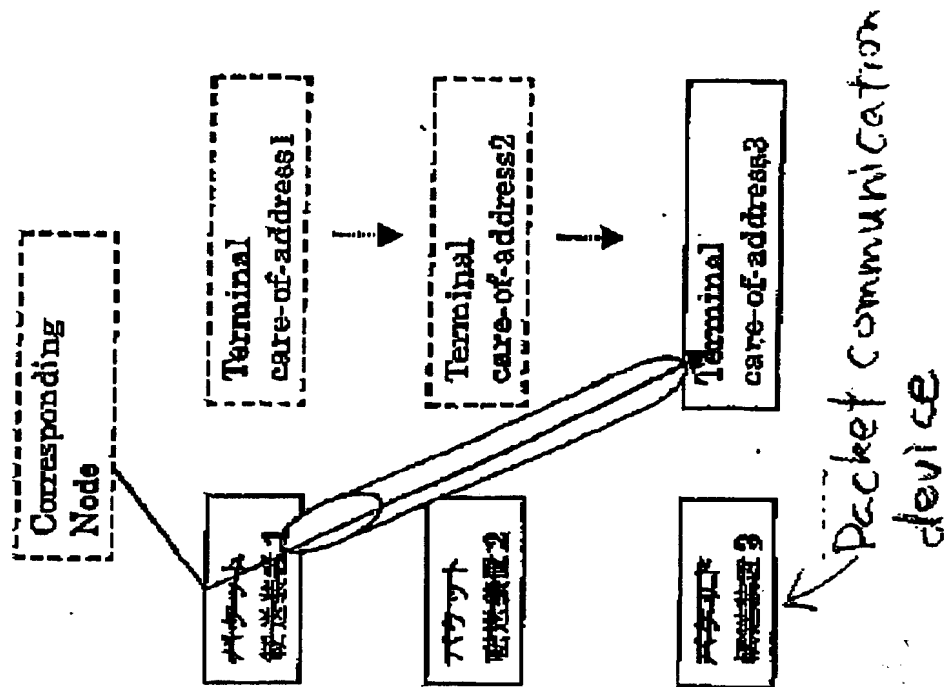
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Annotated Drawings

present invention (claim 3)

US7,092,986 (Wang)

Corresponding Node

Terminal care-of-address1

Terminal care-of-address2

Terminal care-of-address3

Packet communication device

Mobile Agent1

Mobile Agent2

Mobile Agent3

Terminal care-of-address1

Terminal care-of-address2

Terminal care-of-address3